

What is Transect-Based Planning?

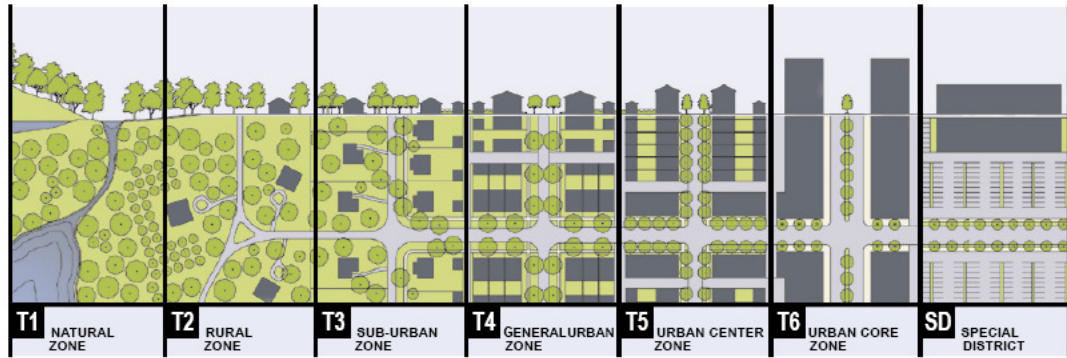
The SmartCode provides a detailed overview of the transect from an ecological perspective, and how transects can also be applied in an urban-to-rural context. As this concept is critical in understanding the application of the SmartCode to the proposed Traditional Neighborhood District in the City of Flagstaff, a brief overview of transect-based Planning is provided below.

A transect or geographical cross-section of nature was first conceived by Alexander Von Humboldt near the end of the 18th century. Originally it was used to map and analyze different ecological environments that showed different characteristics through different zones, such as ocean shores, dunes, wetlands, plains, and uplands or mountains.

Human beings also live in different places such as metropolitan areas, cities, suburbs, towns and farms. New Urbanists have applied the principle of the natural transect to describe a range of environments that can be arranged from the most natural to the most urban as illustrated in the diagram below. The SmartCode and the Traditional Neighborhood District established in Chapter 17 of the Land Development Code is based upon six Transect Zones which describe the physical character of place at any scale according to its density and intensity of Urbanism. Each Transect Zone has its own unique rules for physical design that address for example, such issues as building Placement, streetscape design, and Setback requirements. The Transect Zones are:

- a. **T1 Natural Zone** – consists of lands approximating or reverting to a wilderness condition, including lands unsuitable for settlement due to topography, hydrology or vegetation.
- b. **T2 Rural Zone** consists of sparsely settled lands in open or cultivated state. These include woodland, grasslands, Parks and Open Space areas. Typical buildings are farmhouses, agricultural buildings or cabins.
- c. **T3 Sub-Urban Zone** consists of low-density residential areas, adjacent to higher density zones that include some mixed use. Home occupations and outbuildings are allowed. Planting is naturalistic and Setbacks are relatively deep. Blocks may be large and the roads irregular to accommodate natural conditions.
- d. **T4 General Urban Zone** consists of Mixed-use but primarily Residential urban fabric. It may have a wide range of building types, such as single-family, Sideyard, and Rowhouses. Setbacks and landscaping are variable. Streets with Curbs and Sidewalks define medium-sized Blocks.
- e. **T5 Urban Center Zone** consists of higher Density Mixed-use buildings that accommodate Retail, Offices, Rowhouses and apartments. It has a tight network of streets and small Blocks, with wide Sidewalks, regularly spaced street planting, and buildings set close to the Sidewalks.
- f. **T6 Urban Core Zone** consists of the highest Density and height, with the greatest variety of Uses, and Civic buildings of regional importance. It may have larger Blocks, and streets have regularly spaced tree planting with buildings set close to the wide Sidewalks. The T6 Urban Core is typically associated with Downtown Flagstaff, thus this Transect would not be applied in other locations within the City. (See Table 1)

- g. **Special Districts** consist of areas with buildings that by their Use, Placement or Configuration cannot, or should not, conform to one or more of the six normative Transect Zones.



A TYPICAL RURAL-URBAN TRANSECT, WITH TRANSECT ZONES